

Aug 15

Work Order ID 86571

86571

Page 1

July-05-12 10:45:21 AM

Item ID: D350-591-312

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Heli-Access-Step, Long RH

Start Date: 7/05/12 Start Qty: 5.00

5

Cust Item ID:

Required Date: 7/27/12 Req'd Qty: 5.00

5

Customer:

Reference:

Run Start *NR1*

Approvals: Process Plan:

Date:

Tooling:

Date:

Stop *NR2*

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3272

Rev B

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and type labels as per PPP D350-591-312 CHG001

DAS 16

12/05/12 JB

2/2 for MLT 12-7-31
(5)

110

0.00

110

Large Fab

Large Fab

Memo

0.00

Large Fab

1-Bevel end for welding FWD ONLY

2-Weld Support using Jig DT8719, weld Fwd End Plate as per QSI 004 & Dwg D3272

A/R Aluminum Rod 120854

3-Grind End Plate flush

5 2/2
12-07-17
Ae
12-07-18

Work Order ID 86571

86571

Page 2

July-05-12 10:45:21 AM

Item ID: D350-591-312 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Heli-Access-Step, Long RH
 Start Date: 7/05/12 Start Qty: 5.00 *5* Cust Item ID:
 Required Date: 7/27/12 Req'd Qty: 5.00 *5* Customer:
 Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start *NR1*
 QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC9- Inspect visual per QSI004- Fusion Welds Memo	0.00 0.00				5	0	12-07-18	DAS 18 8-89
130 *130* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00				45			DAS 16 9-89 12/07/19
140 *140* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00				5X	0		MT 12/07/19

Work Order ID 86571

86571

Page 3

July-05-12 10:45:21 AM

Item ID: D350-591-312 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Heli-Access-Step, Long RH
 Start Date: 7/05/12 Start Qty: 5.00 ***5*** Cust Item ID:
 Required Date: 7/27/12 Req'd Qty: 5.00 ***5*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC3- Inspect Part Finish	0.00				5	0	12-719	
150									
QC	Memo	0.00							
Quality Control									
180	Large Fab	0.00				5	0	12-07-24	
180									
Large Fab	Memo	0.00							
Large Fab	1-Assemble Leg Assembly as per Dwg D3272.								
	2-Leave one rivet out until welding is complete.								
	3-Bevel Aft end for welding								
	4-Inspect for foreign object as per QSI 024								
	5-Weld Aft End Plate as per QSI 004 & Dwg D3272 A/RAluminum Rod 120854								
	6-Grind End Plate flush								
	7-Install last rivet as per Dwg.								

Work Order ID 86571

86571

Page 4

July-05-12 10:45:21 AM

Item ID: D350-591-312

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Heli-Access-Step, Long RH

Start Date: 7/05/12 Start Qty: 5.00 ***5***

Cust Item ID:

Required Date: 7/27/12 Req'd Qty: 5.00 ***5***

Customer:

Reference:

Run Start ***NR1***

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop ***NR2***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

190

QC10- Inspect visual per QSI004- ground welds

0.00

190

QC

Memo

0.00

Quality Control

200

QC5- Inspect part completeness to step on W/O

0.00

200

QC

Memo

0.00

Quality Control

210

Chemical Conversion Coat per QSI005 4.1

0.00

210

HandFinish

Memo

0.00

Hand Finishing

5 n/a/26

DA3 17/07/26

45 RH

5x4 RH 12/07/26

Work Order ID 86571

86571

Page 5

July-05-12 10:45:21 AM

Item ID: D350-591-312

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Heli-Access-Step, Long RH

Start Date: 7/05/12 Start Qty: 5.00

5

Cust Item ID:

Required Date: 7/27/12 Req'd Qty: 5.00

5

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

220

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

220

Powdercoat

Powder Coating

Memo

START TIME:

0.00

OVEN TEMPERATURE:

FINISH TIME:

5X RH 12/07/27

230

Wing Walk as per dwg QSI005 4.4 Batch 1112161300

0.00

230

HandFinish

Hand Finishing

Memo

5X RH 11/02/30

240

QC3- Inspect Part Finish

0.00

240

QC

Quality Control

Memo

0.00

5 RH 12/07/30

M121841

8-30
3200
9-00

Work Order ID 86571

86571

Page 6

July-05-12 10:45:21 AM

Item ID: D350-591-312 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Heli-Access-Step, Long RH
 Start Date: 7/05/12 Start Qty: 5.00 *5* Cust Item ID:
 Required Date: 7/27/12 Req'd Qty: 5.00 *5* Customer:
 Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start *NR1*
 QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250	Pick Kit	0.00							
250						5			12/07/31/08
Packaging	Memo	0.00							
Packaging									
260	QC4- 100% Inspect kits for completeness	0.00							
260									
QC	Memo	0.00							
Quality Control									
270		0.00							
270	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPD350-591-312								
	Location: <u>HALL</u>								

Work Order ID 86571***86571***

Page 7

July-05-12 10:45:21 AM

Item ID: D350-591-312

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Heli-Access-Step, Long RH

Start Date: 7/05/12 Start Qty: 5.00

5

Cust Item ID:

Required Date: 7/27/12 Req'd Qty: 5.00

5

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280

QC21- Final Inspection - Work Order Release

0.00

280

QC

Memo

0.00

Quality Control

12/8/2012
MCJ 12/08/01

Picklist Print

July-05-12 10:45:21 AM

Page 1

Work Order ID: 86571
 Parent Item: D350-591-312
 Parent Item Name: Heli-Access-Step, Long RH

Start Date: 7/05/12

Required Date: 7/27/12

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP Rev:A04.03.22New issue KJ/RF
 IPP Rev:B 07-06-09 Added D3572-1 JLM
 IPP Rev:C 08-04-02 ECN1163 DD verified by:EC
 IPP Rev:D 08-04-03 ECN1164 DD verified by:EC
 10.04.28 verified by:EC
 IPP Rev:D fixe route seq in bom DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3272-1 Step		Manufactured	No			110	Each	5.0000	1	5		12.07.11	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST		-10							
				WA	886567	15							
					84812	5							
D3067-1 End Plate		Manufactured	No			110	Each	133.0000	1	5		12.07.17	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				WA		129							
					78608	4							
					83855	50							
					84534	75							
				WA016		4							
					67582	2							
					68214	1							
					79607	1							
D3219-1 Plate		Manufactured	No			110	Each	250.0000	2	10		12.07.17	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				WA		191							
					82221	74							
					83852	117							
				WA016		18							
					73410	12							
					77674	6							
				WA017		41							
					81971	41							

Picklist Print

July-05-12 10:45:21 AM

Page 2

Work Order ID: 86571

Parent Item: D350-591-312

Parent Item Name: Heli-Access-Step, Long RH

Start Date: 7/05/12

Required Date: 7/27/12

Start Qty: 5.00

Required Qty: 5.00

D3066-1 Manufactured No 180 Each 99.0000 2 10
Spacer

Location	Loc Qty
ST176	31
83854 →	31
WA	68
85449	68

Loc Code

B86964 (x9)
Ae 12.07.23

(1)

MS20600-AD4W4 Purchased No 180 Each 3,202.0000 16 80
Rivets

Location	Loc Qty
321	878
121652 →	878
ST321	2324
121011	9
121340 →	315
121444	2000

Loc Code

Ae 12.07.23

(40)

(40)

D3065-041 Manufactured No 180 Each 73.0000 1 5
Step Leg Assembly Hi

Location	Loc Qty
WA	73
66149	0
79336	1
83870 →	32
83871	40

Loc Code

Ae 12.07.23

(5)

Picklist Print

July-05-12 10:45:21 AM

Page 3

Work Order ID: 86571

Parent Item: D350-591-312

Parent Item Name: Heli-Access-Step, Long RH

Start Date: 7/05/12

Required Date: 7/27/12

Start Qty: 5.00

Required Qty: 5.00

D3067-1 Manufactured No 180 Each 133.0000 1 5 12.07.24
End Plate

Location	Loc Qty	Loc Code
WA	129	
78608	4	
83855	50	
84534	75	5
WA016	4	
67582	2	
68214	1	
79607	1	

S/ AN3-35A Bolt Purchased No 250 Each 76.0000 2 10 ✓ JB

Location	Loc Qty	Loc Code
ST353	76	
121652	76	121652

S/ D3235-1 Mounting Lug Manufactured No 250 Each 146.0000 2 10 ✓ JB

Location	Loc Qty	Loc Code
ST481	146	
83311	46	83311
83853	100	

S/ D3278-041 Support Assembly Manufactured No 250 Each 93.0000 0 5 ✓ JB 12/07/31

Location	Loc Qty	Loc Code
ST471	40	
83857	40	
ST481	53	
83856	13	83856
83858	40	

July-05-12 10:45:21 AM

Shop Packet Print

Page 3

Picklist Print

July-05-12 10:45:21 AM

Page 4

Work Order ID: 86571

Parent Item: D350-591-312

Parent Item Name: Heli-Access-Step, Long RH

Start Date: 7/05/12

Required Date: 7/27/12

Start Qty: 5.00

Required Qty: 5.00

AN960JD416

NAS1149D0463J

Purchased

No

250

Each

29.0000

16

80

✓

122441 JB

Washer

Location

Loc Qty

Loc Code

ST351

29

116289

8

119097

21

AN960JD516

NAS1149D0563J

Purchased

No

250

Each

12.0000

4

20

✓

119546 JB

Washer

Location

Loc Qty

Loc Code

ST338

12

2612

12

AN5-36A

Purchased

No

250

Each

224.0000

2

10

✓

JB

Bolt

Location

Loc Qty

Loc Code

340

74

121652

74

ST340

150

121708

50

122141

100

D2618

Manufactured

No

250

Each

204.0000

2

10

✓

JB

Bushing

Location

Loc Qty

Loc Code

ST012

204

76130

2

83614

1

84646

201

D2230-3

Manufactured

No

250

Each

158.0000

4

20

✓

JB

12/07/31

Lug

Location

Loc Qty

Loc Code

ST480

158

83261

2

84133

156

84133

July-05-12 10:45:21 AM

Shop Packet Print

Page 4

Picklist Print

July-05-12 10:45:21 AM

Page 5

Work Order ID: 86571

Parent Item: D350-591-312

Parent Item Name: Heli-Access-Step, Long RH

D2856-400 Manufactured No

Abrasion Strip

cut (2) D2856-400-720 as per dwg

Location

Loc Qty

ST403	159.398
81875	159.398
ST409	9.4445
63735	0.6696
68076	0.3149
71164	8.46

Start Date: 7/05/12

Required Date: 7/27/12

Start Qty: 5.00

Required Qty: 5.00

168.8425 1.2 6

Loc Code

81875

MS21042L3 Purchased No

Nut

Location

Loc Qty

ST300	1330
117885	32
119017	771
119075	138
121444	389
ST317	2000
122141	2000

3,330.0000 2 10

Loc Code

122141

AN4-13A Purchased No

Bolt

Location

Loc Qty

ST357	1143
120187	19
120422	2
120770	12
121652	912
122063	198

1,143.0000 8 40

Loc Code

121622

July-05-12 10:45:21 AM

Shop Packet Print

Page 5

Picklist Print

July-05-12 10:45:21 AM

Page 6

Work Order ID: 86571

Parent Item: D350-591-312

Parent Item Name: Heli-Access-Step, Long RH

Start Date: 7/05/12

Required Date: 7/27/12

Start Qty: 5.00

Required Qty: 5.00

MS21042L5

Purchased No

250 Each

1,224.0000

2

10

✓ JB

[Handwritten signature]

Nut

Location

Loc Qty

Loc Code

300	500
121652	500
ST300	724
108827	4
116105	5
116548	43
117611	2
119109	658
17651	4
2937	8

119109

MS21042L4

Purchased No

250 Each

1,705.0000

8

40

✓ JB

[Handwritten signature]

Nut

Location

Loc Qty

Loc Code

ST300	1705
119075	116
121011	193
121444	1096
121652	300

121444

AN960JD10

NAS1149D0363J

Purchased No

250 Each

0.0000

4

20

✓ JB

12/07/31

[Handwritten signature]

Washer

121524

July-05-12 10:45:21 AM

Shop Packet Print

Page 6

DART

DESIGN <i>90</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>LE</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3272	REV. B SHEET 1 OF 3
DATE 07.05.18		TITLE STEP ASSEMBLY, HI LONG	SCALE NTS
A	04.03.01	NEW ISSUE	
B	07.05.18	D3272-1 WAS D2622-120	

RELEASED07 06 04 *[Signature]*

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3272-041	STEP ASSEMBLY, HIGH LONG (LH)
	X	D3272-042	STEP ASSEMBLY, HIGH LONG (RH)
1	1	D3065-041	LEG ASSEMBLY
2	2	D3066-1	SPACER
2	2	D3067-1	END PLATE
2	2	D3219-1	SUPPORT
1	1	D3272-1	STEP
16	16	MS20600AD4W4	RIVET

*[Handwritten signature]***GENERAL NOTES:**

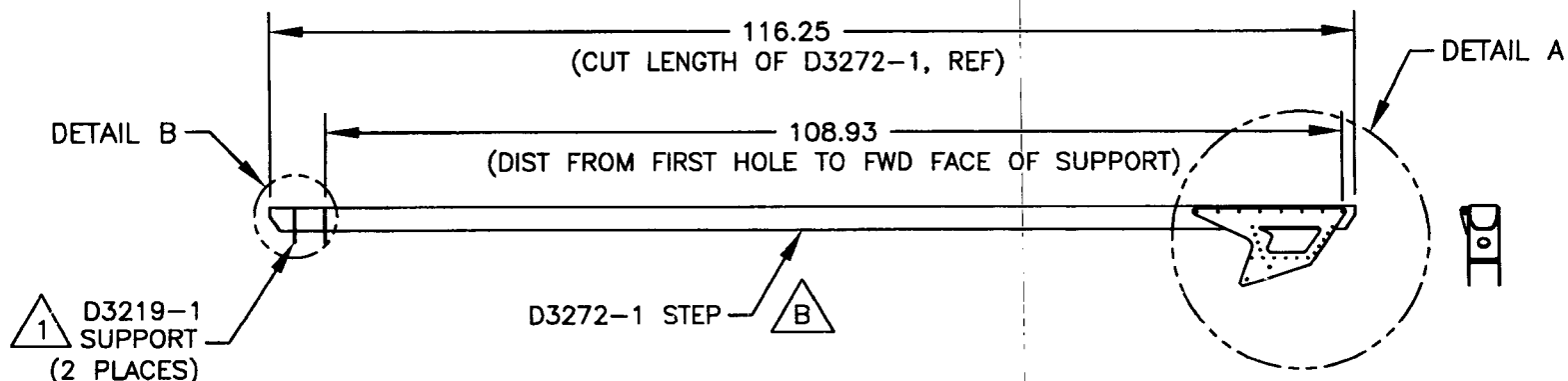
- 1) D3272-041 SHOWN. FOR D3272-042, INSTALL D3219-1 SUPPORT OPPOSITE SIDE
- 2) WELD PER DART QSI 004.
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005.4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX.

Copyright © 2004 by DART AEROSPACE LTD

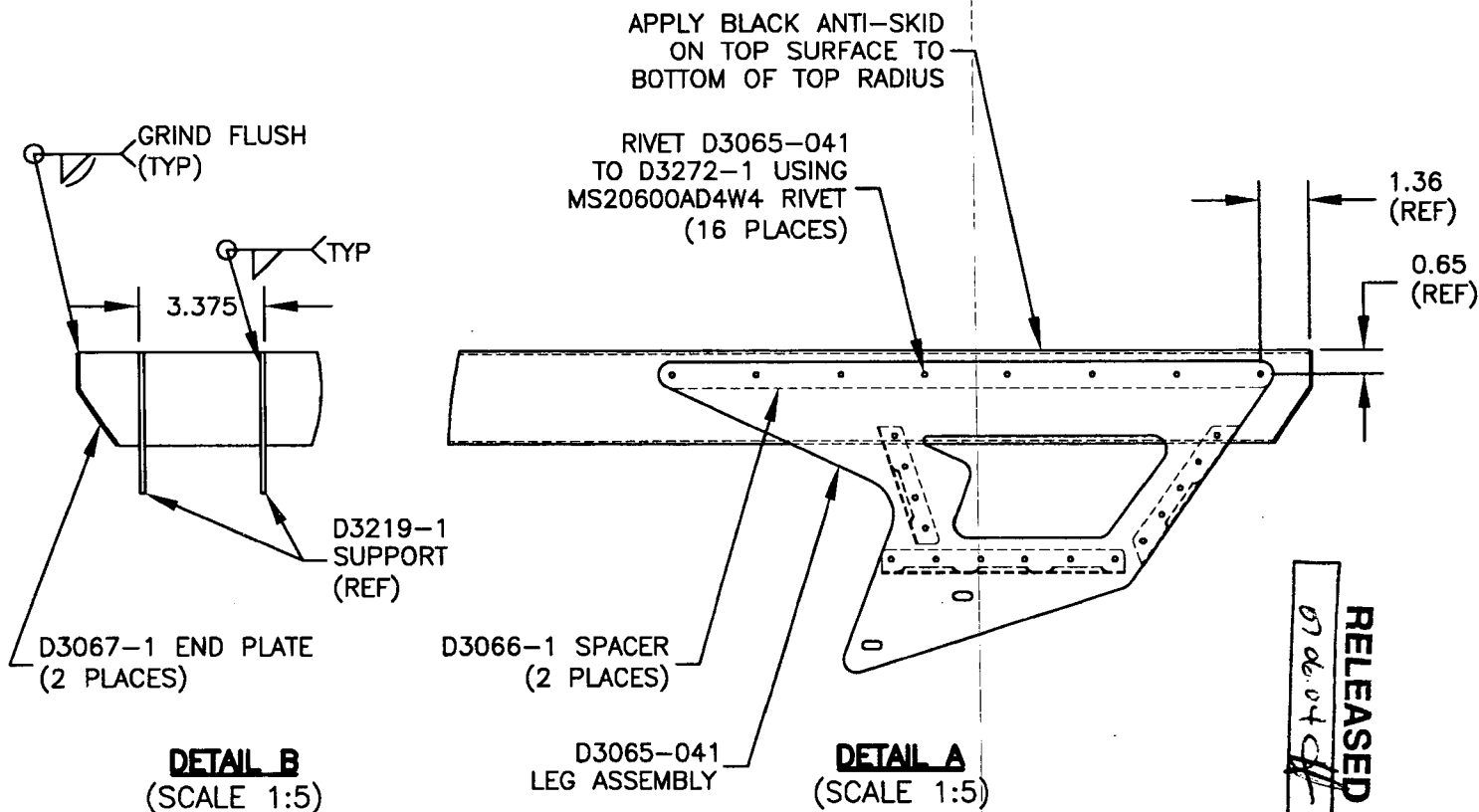
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DART

DESIGN	AP	DRAWN BY	JB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	CE	APPROVED	JB	DRAWING NO. D3272
DATE	07.05.18	TITLE	STEP ASSEMBLY, HI LONG	REV. B SHEET 2 OF 3
		SCALE	1:20	



D3272-041 STEP ASSEMBLY (LH. SHOWN)
D3272-042 STEP ASSEMBLY (RH, OPPOSITE)

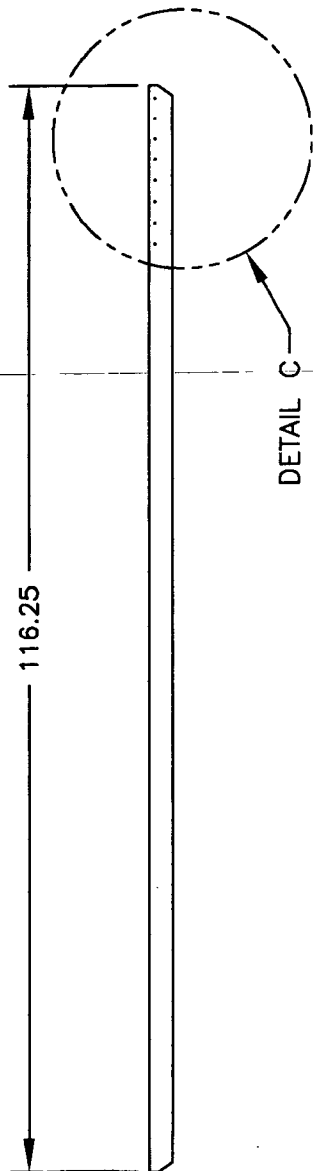




DESIGN <i>qp</i>	DRAWN BY <i>B</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>LE</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3272	REV. B SHEET 3 OF 3
DATE 07.05.18	TITLE STEP ASSEMBLY, HI LONG		SCALE 1:20

RELEASED

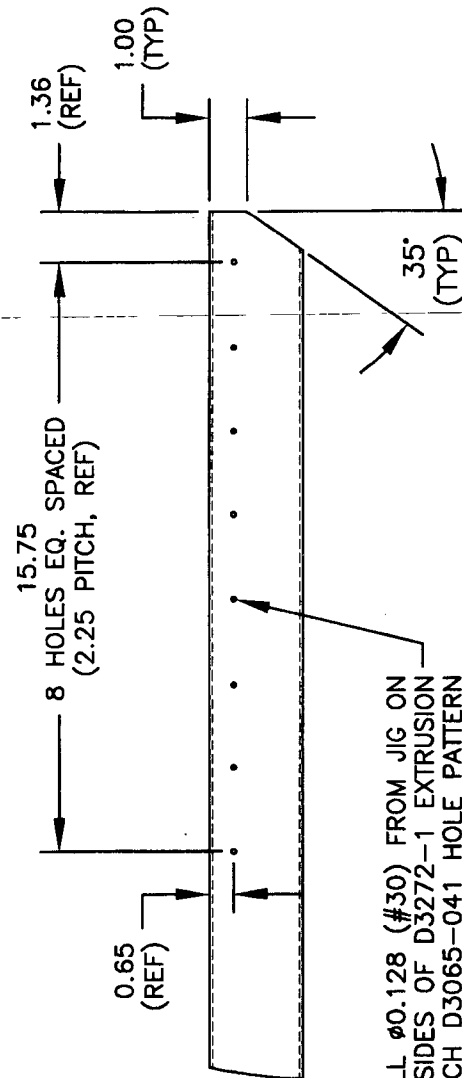
07.06.04 *[Signature]*



DETAIL C

B **D3272-1 STEP**

(MAKE FROM D2622-120 STEP EXTRUSION)



DETAIL C
(SCALE 1:5)

Copyright © 2004 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

Qty -211	Qty -212	Qty -213	Qty -214	Qty -215	Qty -216	Qty -311	Qty -312	Part Number	Description
X								D350-591-211	Heli-Access-Step™ , Long Step – High Skid, LH
	X							D350-591-212	Heli-Access-Step™ , Long Step – High Skid, RH
		X						D350-591-213	Heli-Access-Step™ , Short Step – High Skid, LH
			X					D350-591-214	Heli-Access-Step™ , Short Step – High Skid, RH
				X				D350-591-215	Heli-Access-Step™ , Short Step – Low Skid, LH
					X			D350-591-216	Heli-Access-Step™ , Short Step – Low Skid, RH
						X		D350-591-311	Heli-Access-Step™ , Long Step – High Skid, LH
							X	D350-591-312	Heli-Access-Step™ , Long Step – High Skid, RH
1								D3070-041	STEP ASSEMBLY (HIGH-LONG, LH)
	1							D3070-042	STEP ASSEMBLY (HIGH-LONG, RH)
		1						D3078-041	STEP ASSEMBLY (HIGH-SHORT, LH)
			1					D3078-042	STEP ASSEMBLY (HIGH-SHORT, RH)
				1				D3168-041	STEP ASSEMBLY (LOW-SHORT, LH)
					1			D3168-042	STEP ASSEMBLY (LOW-SHORT, RH)
						1		D3272-041	STEP ASSEMBLY (HIGH-LONG, LH)
							1	D3272-042	STEP ASSEMBLY (HIGH-LONG, RH)
4	4							D2182B035	RUBBER CUSHION
		2	2	2	2			D2230-1	MOUNTING LUG
		2	2	2	2	4	4	D2230-3	MOUNTING LUG
8	8							D2274	RADIUS BLOCK
						2	2	D2618	BUSHING
4	4	4	4	4	4			D2732-030	CUSHION
2	2	1	1	1	1	2	2	D2856-400-720	ABRASION STRIP
2	2							D3064-1	CLAMP
1	1							D3079-041	SUPPORT ASSEMBLY
4	4							D3080-1	CLAMP
						2	2	D3235-1	MOUNTING LUG
						1	1	D3278-041	SUPPORT ASSEMBLY
2	2	2	2	2	2	2	2	AN3-35A	BOLT
10	10	2	2	2	2			AN4-11A	BOLT
		4	4	4	4	8	8	AN4-13A	BOLT
						2	2	AN5-36A	BOLT
4	4	4	4	4	4	4	4	AN960JD10	WASHER
20	20	12	12	12	12	16	16	AN960JD416	WASHER
						4	4	AN960JD516	WASHER
2	2	2	2	2	2	2	2	MS21042L3	NUT
10	10	6	6	6	6	8	8	MS21042L4	NUT
						2	2	MS21042L5	NUT
						1	1	*DSI 9410-011	STEP MODIFICATION KIT

*DSI 9410-011 Step Modification Kits are provided with all D350-591-311 and D350-591-312 Steps. This kit is provided as an option for the installer and is therefore **NOT REQUIRED** to complete the installation of the D350-591-311 or D350-591-312 Steps. Refer to Figure 21 for installation of the DSI 9410-011 Kit.

• COPYRIGHT © 1993 BY DART AEROSPACE LTD •

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

Revision: G

Date: 08.10.06